What to Do with all those Traces People Leave behind: Computing, Culture, and (Bits of) Context?

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Abstract
As organizations produce ever-larger torrents of text, images, sounds and numbers we find an increased attention to how researchers and organizational members alike can gain insights from these traces of social practices. Those issues have gained attention in the popular press and funding agencies alike. But, how do we best study traces of social practices left behind by organizational members? This fishbowl session aims to bring together researchers from different disciplines (such as HCI, CSCW, Organizational Studies, Information Systems, Library & Information Sciences, etc.) to brainstorm about the different approaches they have used (or, are planning to use) in studying trace data and documents, and to become aware of different types of methodological approached to trace data that are pursued in other research communities. The session will be followed by short focused interviews with selected participants that summarize important themes from the session, which will subsequently be made accessible online.
Keywords: methodology, trace data, documents, ethnography
Citation: Østerlund, C., Sawyer, S., Ribes, D., Shankar, K., & Geiger, S. (2014). What to Do with All those Traces People Leave Behind: Computing, Culture, and (Bits of) Context? In *iConference 2014 Proceedings* (p. 1234–1237). doi:10.9776/14250

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1 What to do with all those traces people leave behind?

As organizations produce ever-larger torrents of text, images, sounds and numbers we find an increased attention to how researchers and organizational members alike can gain insights from these traces of social practices. Those issues have gained attention in the popular press and funding agencies alike. One finds a steady stream of articles discussing how a data deluge swamps not only the big sciences such as astronomy, biology, medicine, and physics, but also the social sciences and humanities (Holtz, 2009). Large organizations are also grappling with the burden, opportunity and responsibilities of large data sets. The military, for instance, is awash in data from drones (Drew, 2010).

The rapid growth in data opportunities (and issues) have been on the radar of the funding agencies for some time – and of late include grant opportunities for the social sciences and humanities (e.g., NEH, Digging for Data). In the private sector many consultant groups and firms (e.g., IDC, Gartner, Fios, Attenex) now specialize in the scanning, indexing, and mining of documents. Likewise, we hear calls across many intellectual communities for a greater emphasis on data mining and the maintenance and sharing of large document repositories as new data options are reshaping scholarly work.

Studying trace data (whether in the form of text, images, sounds, numbers, etc.,) allow scholars to position organizational members' immediate activities and situated routines in their larger social and organizational context (Mayernik, Wallis, & Borgman, 2012; Ribes & Lee, 2010; Smith, 2005). As documents carry institutional structures and point to both past and future activities they open a window to larger organizational practices (Smith, 2005; Boellstorff, Nardi, Pearce, & Taylor, 2012; Hine, 2007; Jirotka, 2005; Sawyer, Kaziunas, & Østerlund, 2012). Furthermore, researchers can often access traces of social practices

in large document repositories, opening a window to patterns of coordination and knowledge work that goes well beyond immediate observations (Geiger & Ribes, 2011; Østerlund, Sawyer, & Kazianus, 2010; Østerlund, 2008; Shankar, 2006)

But, how do we best study traces of social practices left behind by organizational members? The answer may seem tantalizingly straightforward. You gather a pile of what organizational members drop left and right and start digging through it. But if you step back and begin looking through your qualitative method books you will realize that documents, artifacts and other traces tend to serve as a lower caste in field research. Most chapters and articles will help the reader refine their interview and participant observation skills. Trace data are often addressed in passing under headlines such as "secondary sources" or "unobtrusive techniques," if at all. Consequently, qualitative researchers develop strong skills in producing rich descriptions of the context in which some usually unspecified technology is seen to operate. Many researchers appear to treat traces of social practices as they approach interview transcripts and field notes – with little regard to how they may hold a unique position in organizational infrastructures and work practices.

2 Intended Audience & Proposed Activities

This fishbowl session aims to bring together researchers from different disciplines (such as HCI, CSCW, Organizational Studies, Information Systems, Library & Information Sciences, etc.) to elevate the discourse regarding different approaches they have used (or, are planning to use) in studying trace data, and to become aware of different types of methodological approached to trace data that are pursued in other research communities. The session will be followed by short focused interviews with selected participants that summarize important themes from the session[1]. These will be edited into a short podcast and made accessible online.

3 Roles and Topic Description

Steve Sawyer, Syracuse University, will act as the moderator in support of the following fishbowl initiators:

David Ribes, Georgetown University

Historical Ethnography of Sociotechnical Systems

Increasingly, organizations are making more and more documentary, trace and other archival data available online -- often reaching back into their own archives to conduct systematic digitization and indexing endeavors. Historical ethnography draws together the ethnographic sensibility for lived experience, members' meanings, and practice, with the documentary methods of archival research. A historical ethnographic approach to sociotechnical systems will allows us to:

- Track longitudinal trajectories of technological change, rather than single moments of innovation and adoption.
- Recover the novelty, surprise, or 'sexiness' of technologies at each moment: while we may have become accustomed to email, instant messaging, and relational databases, they were at one point inspiring, disruptive or to be ignored as a fad.
- Track the uneven circulation of innovations: a technology that has been normalized, or even considered outdated in some contexts, may be revelatory at other sites of adoption

[1] E.g., see the interview with Christine Hine at http://www.youtube.com/watch?v=sHvEzvqA0VI&noredirect=1.

Kalpana Shankar, University College Dublin
Reflections on Trace Data in the Study of Social Science Data Archives
Social Science Data Archives (SSDAs) comprise some of the earliest and most successful efforts to curate research data, but are seldom discussed as exemplars in the contemporary discussions on digital curation. We will report on how we have been using "trace data" (organizational documents, notes, and related texts) in our ongoing comparative studies of several long-standing and established SSDAs to surface ideas relevant to today's concerns about data. For this session, we will focus on the advantages and disadvantages of using such data to yield insights into organizational practices over time.

Stuart Geiger, UC Berkeley
Trace-Ethnography
Geiger argues that good 'quantitative' trace data analysis (or even 'Big Data' in general) is actually *harder* than many other methods, because it rests on an often-unacknowledged qualitative/ethnographic understanding of how that trace data is generated and what it means in a specific socio-technical context.

Carsten Østerlund, Syracuse University
Documenting work
Østerlund discusses the benefits and challenges of qualitative research focusing on people's unfolding documenting work. He presents a methodological research strategy integrating the gathering and analysis of the online and location specific documents littering our work environments.

4 Relevance to the Conference/Significance to the Field

This fishbowl session is directly relevant to the cross-cutting theme for the iConference' 2014 (Breaking down Walls | Culture, Context, Computing) as it focuses attention on how scholars conduct computer-supported analysis of trace data and still maintain a rich contextual and cultural grounded methodological approach to our data. Doing so will require us to break down walls of existing methodological traditions. To that end, the fishbowl format will promote an interactive discussion by bringing together researchers from different disciplines, and bringing forth awareness concerning different approaches that are available for studying traces of social practices in context.

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